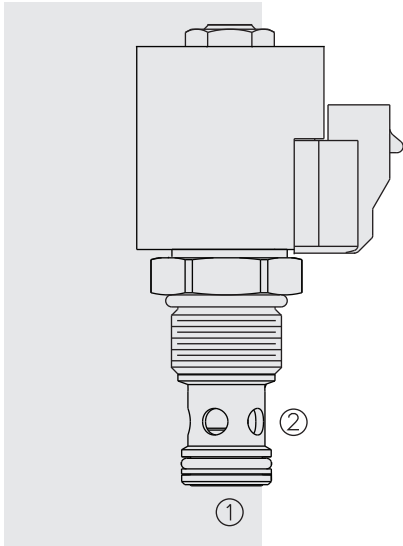
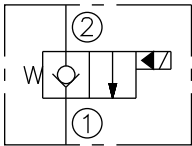


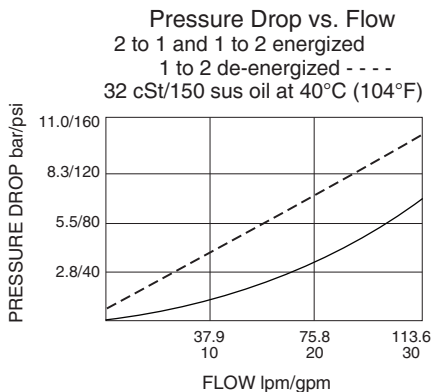
# HSV12-20 HyPerformance™ Poppet, 2-Way,



## ISO SYMBOL



## PERFORMANCE (Cartridge Only)



## DESCRIPTION

A solenoid-operated, 2-way, piloted, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in high-pressure applications requiring low internal leakage.

## OPERATION

When de-energized, the HSV12-20 blocks flow from ports 2 to 1. In this mode, the cartridge will allow flow from ports 1 to 2 after overcoming the spring forces (see performance graph). When energized, the valve will allow flow from ports 2 to 1 while severely restricting flow from ports 1 to 2.

**Operation of Manual Override Option:** The manual override feature is intended for emergency use, not continuous duty operation. To operate, the manual override pin must be seated in the lower detent groove. To shift the valve manually, the operator pushes down on the knob and rotates 180 degrees in either direction. When the manual override is actuated, increased flow can be achieved by pulling on the knob.

## FEATURES

- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Cost effective cavity.
- All HyPerformance products are tested to the rigorous standards of the NFPA specification T2.6.1.
- All HyPerformance valves are tested at a verification level of 90% and an assurance of 99%.

## RATINGS

**Operating Pressure:** 345 bar (5075 psi); 10% cycle life: 420 bar (6090 psi)  
 Note: All HyPerformance products are tested for 900K cycles at 350 bar and 100K cycles at 420 bar.

**Proof Pressure:** 690 bar (10,000 psi)

**Burst Pressure:** 1380 bar (20,000 psi)

**Flow Rating:** 114 lpm (30 gpm)

**Internal Leakage:** 7 drops/minute with 350 bar (5075 psi) at port 2.

**Temperature:** -54 to 107°C (-65 to 225°F) with urethane seals

**Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage

**Response Time:** First indication of change of state with 100% voltage supplied at 80% of nominal flow rating: Energized: 40 msec.; De-energized: 80 msec.

**Initial Coil Current Draw at 20°C:** E-Coil: 1.7 amps at 12 VDC; 0.85 amps at 24 VDC

**Minimum Pull-in Voltage:** 85% of nominal at 207 bar (3000 psi)

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

**Cavity:** HVC12-2; See page 9.112.1

**Cavity Tool:** CT12-2XX; See page 8.600.1

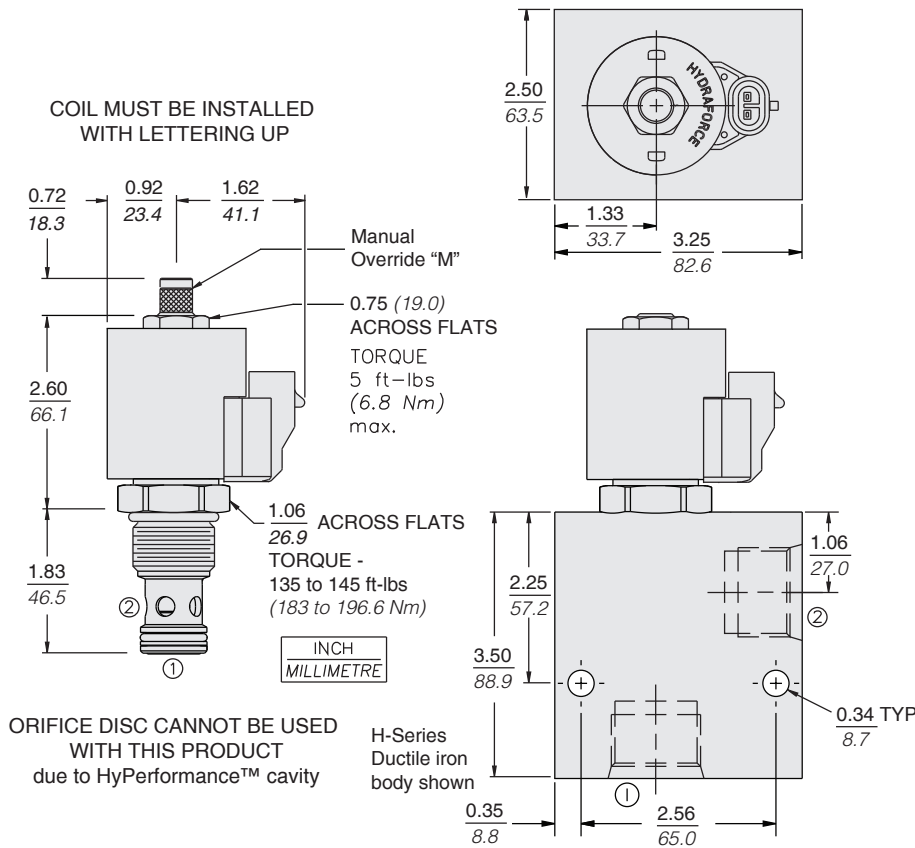
**Seal Kit:** SK12-2U-0; See page 8.650

**Coil Nut:** Part No: 4553800

# Normally Closed

# HSV12-20

## DIMENSIONS



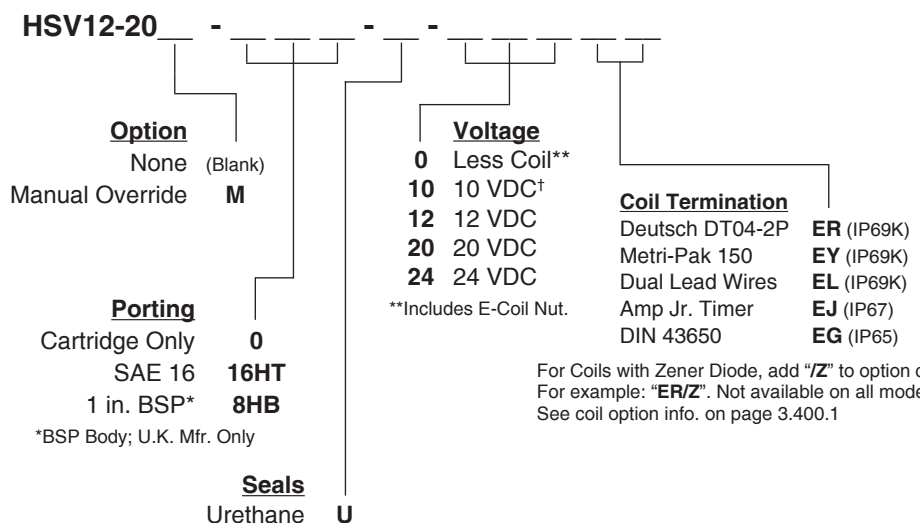
## MATERIALS

**Cartridge:** Weight: (without coil and nut) 0.28 kg. (0.61 lbs.) Steel with hardened work surfaces. Urethane seals without back-up rings standard.

**Ported Body:** Weight: 2.62 kg. (1.18 lbs.) H-series ductile iron. Rated to 345 bar (5000 psi). See page 8.012.1.

**10-Size E-Coil:** Weight: 0.41 kg. (0.9 lbs.); Fully encapsulated with rugged external metal shell. Rated up to IP69K with integral connectors. See page 3.400.1.

## TO ORDER



Note: Urethane seals recommended for pressures over 241 bar (3500 psi). Consult factory for additional seal options.